

The Promises and Challenges of Artificial Intelligence for Teachers: a Systematic Review of Research

Year: 2022 | Citations: 539 | Authors: I. Celik, M. Dindar, H. Muukkonen, Sanna Järvelä

Abstract

This study provides an overview of research on teachers' use of artificial intelligence (AI) applications and machine learning methods to analyze teachers' data. Our analysis showed that AI offers teachers several opportunities for improved planning (e.g., by defining students' needs and familiarizing teachers with such needs), implementation (e.g., through immediate feedback and teacher intervention), and assessment (e.g., through automated essay scoring) of their teaching. We also found that teachers have various roles in the development of AI technology. These roles include acting as models for training AI algorithms and participating in AI development by checking the accuracy of AI automated assessment systems. Our findings further underlined several challenges in AI implementation in teaching practice, which provide guidelines for developing the field.